

**IN THE CLAIMS:**

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-47 (Cancelled)

Claim 48 (Previously presented): A method of producing an immune response in an animal comprising, administering to said animal, an effective amount of an antigenic composition, comprising an adjuvant and an isolated *Chlamydia* species high molecular weight (HMW) protein, said HMW protein encoded by a nucleic acid comprising nucleotide residues 466 to 3417 of SEQ ID NO.:1, wherein the *Chlamydia* species is *Chlamydia trachomatis*, *Chlamydia pecorum*, or *Chlamydia pneumoniae*.

Claim 49 (Previously presented): The method of claim 48, wherein said HMW protein comprises an amino acid sequence of amino acid residues 29 to 1012 of SEQ ID NO.:2.

Claim 50 (Previously presented): The method of claim 48, wherein said HMW protein is obtained using plasmid pAH342 obtainable from *E.coli* BL21 (pAH342) assigned ATCC accession number 98538.

Claim 51 (Previously presented): A method of producing an immune response in an animal, comprising administering to said animal, an effective amount of an antigenic composition, comprising a pharmaceutical carrier and an isolated recombinantly produced *Chlamydia* species HMW protein, said HMW protein encoded by a nucleic acid comprising a nucleotide sequence of SEQ ID NO.:1, wherein the *Chlamydia* species is *Chlamydia trachomatis*, *Chlamydia pecorum*, or *Chlamydia pneumoniae*.

Claim 52 (Previously presented): A method of producing an immune response in an animal, comprising administering to said animal, an effective amount of an antigenic composition, comprising a pharmaceutical carrier and an isolated recombinantly produced *Chlamydia* species HMW protein, wherein said HMW protein comprises an amino acid sequence of SEQ ID NO.:2.

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Claim 53 (Previously presented): A method of producing an immune response in an animal, comprising administering to said animal, an effective amount of an antigenic composition, comprising a pharmaceutical carrier and an isolated recombinantly produced *Chlamydia* species HMW protein, wherein said HMW protein is obtained using plasmid pJJ701 obtainable from *E.coli* AR58 (pJJ701) assigned ATCC accession number PTA-4123.

Claim 54 (Currently amended): A method of producing an immune response in an animal, comprising administering to said animal, an effective amount of an antigenic composition, comprising a pharmaceutical carrier and an isolated recombinantly produced *Chlamydia trachomatis*, *C. pecorum* or *C. pneumoniae* HMW protein, wherein said HMW protein is encoded by a nucleic acid having a nucleotide sequence which hybridizes under conditions comprising 50% formamide and 37°C to a nucleotide sequence complementary to the nucleotide sequence of SEQ ID NO.:1 from residue ~~382~~ 466 to residue 3417, and which HMW protein is recognized by an antibody that specifically binds to a peptide comprising an amino acid sequence of SEQ ID NO.:2.

Claim 55 (Previously presented): The method of claim 48-54, wherein said composition is formulated as a microparticle, a capsule, a liposome preparation or an emulsion.

Claim 56 (Previously presented): The method of Claim 51-54, wherein said animal is a mammal or a bird.

Claim 57 (Previously presented): The method of Claim 51-54, wherein said composition further comprises an adjuvant.